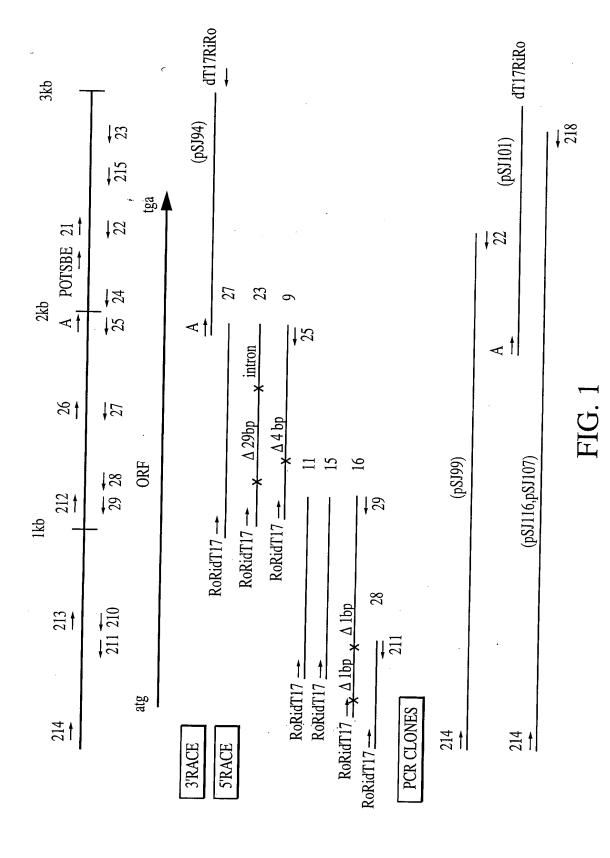
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Inventor: Stephen A. JOBLING et al. Serial No. 09/297,703
Attorney Docket No.: 054163-5001 Page 1 of 33



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AGCGAAATGGGACAÇTACAÇCATATCAGGAATACGTTTTÇCTTGTGCTCÇACTCÇGCAAATCTACCGGÇTTCCATGGTGATCGAAGGACCTCCTCTTTGCCTTTTCCTTCAACTTC TCGCTTTACCCTGTGATGTGGTATAGTCCTTATGCAAAAGGAACACGAGGTGAGGCGTTTAGAGTTAGATGGCCGAAGGTACCACTAGCTTCCTGGAGGAGAACGAAAGGAAGTTGAAG Nco I ᆸ ⊱ \succ н G

<u>AAGAĄGGCGGCGTTŢTCTAGGAGGGTCTTÇTCTGGAAAGŢCATCŢCATGAATCTGACTCÇTCAAĄTGTAĄTGGTÇACTGÇGTCTĄAAAAGĄGTCCŢTCCTĢATGGTTGGAŢTGAAŢGCTAŢ</u> ß വ α α \Box Ç Ξ [_ Ç 亡 ഗ 0 ഗ × ĸ 二 p. ď Д Ēτ 24 Ç

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720 <u>ÇAACĄCCTAGATTAÇCGGTĄTTCAÇAGTAÇAAAAGACTCÇGAGAĄGAAAȚTGACĄAGTAŢGAAGGTAGTÇTGGAŢGCAŤŢTTCTÇGTGGÇTATGAAAGŢTTGGŢTTCTÇACGCAGTGAA</u> GTTGTGGATCTAATGGCCATAAGTGTCATGTTTTCTGAGGCTCTTCTTTAACTGTTCATACTTCCATCAGACCTACGTAAAAGAGCCCCGATACTTTCAAACAACAAGGGGCGTCACTT വ വ 더

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FIG. 2-2 FIG. 2-3



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GTAAGTATAATACGATCAAAACCCATAGTGCAGTGTTTGAAAATACGTCGATCGTCGGCTAAACCTTGAGGACTACTAAATTTCAGGGATCATCTATTTCGAGTGCTCTCAATCCAGAAGAA CATICATATIAIGCTAGITITIGGGTATCACGICACAAACTITITAIGCAGCTAGCAGCCGATITIGGAACTCCTGATGATTAAAGTCCCTAGATAAAGCTCACGAGTTAGGTTAGATAAAAGCTCACGAGTTAGGTCTTT Z, \bowtie \Box \Box Д \vdash G []4 α ഗ က ø Ø z \triangleright H G [T വ S

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entor: Stephen A. JOBLING et al. Attorney Docket No.: 054163-5001

CTCTTCCCAGAGGCTGTCAÇCATTGGTGAAGATGTTAGTGGAATGCCAAÇAGTTTGCATTCCGGTTGAAGATGGTGGTGGTTGCTTTGATTATCGTCTCCACATGGCTGTTGCTTGATAAA TACATGTGGGTAGTACCTAACGTCCATCTAAAGTGGCCGTTGATGTTACTTATGAAACCTATACGTTGACTACATCTACGACAACAAATAGACTACGACAACTTACTATACTAAGTACCA GAGAAGGGTCTCCGACAGTGGTAACCACTTCTACAATCACCTTACGGTTGTCAAACGTAAGGCCAACTTCTACCACCACAACCTAATAGCAGAGGTGTACCGACAACGACGACAACTATT ATGTACACCCATCATGGATTGCAGGTAGATTTCACCGGCAACTACAATGAATACTTTGGATATGCAACTGATGTAGATGCTGTGTGTTTATCTGATGCTGTTGAATGATA S Ø Ы 1---1 ß 口 \succ X \geq G വ Д > E \Box ⊢ Ξ Ø 24 Ö × > α ß G 呂 z Д Ö Д Д വ G 0 Ø 二 \mathbf{z} Д

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<u>ĠCCTĄTGGTŢTCATĢACTTÇTGAGÇACCAĢTATAŢATCAÇGGAAĢGATGĄAGGAĢATCGĢATCAŢTGTTTTGAGAGGGĢAAACÇTTGTŢTTTGŢATTCĄACTTŢCATTĢGACTĄACAGÇ</u> <u>ATTCÇAGGGAACAAÇCACAĢTTATGATAAATGCCGTCGTAGATTŢGATCŢAGGTĢATGCĄGACTĄTCŢAĄGATAŢCATGGAATGÇAAGAGTTTGATCAGGCAATGCAACATCTTGAAGAA</u> TAAGGTCCCTTGTTGGTGTCTATACTATTTACGGCAGCATCTAAACTAGATCCACTACGTCTGATAGATTCTATAGTACCTTACGTTCTAAACTAGTCCGTTACGTTGTAGAACTTCTT cggataccaaagtactgaagactcgtggtcatatatagtgccttcctacttcctctagcctagtaacagaaactctcccttttggaacaaaaacataaagttgaaagtta ഥ ß z 耳 ᄄ \Box 14 口 0 ᆸ \mathbf{z} z c Ξ α \succ 口 α ᄄ ы \triangleright Ø \Box \Box Ċ c ഥ Ω ᄄ α 召 α വ α \Box 耳 \succ ഥ S I

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CTGCCCACCÁTACTÁTTGGCCGGAGCCAGGAAGTACCATÁTACGTGGTAGATCCTGTCGCAGGTACGAAATCATCTTCTACTTCTTCGTCTTCTTTCATTTTCACTT D G W Y D N R P R S F M V Y A P S R T A V V H A L V E D E E N E A E N E V E S E

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TAGTACTTTGGCAAGTCCACGTTATTGGATACCATGGATGTCCGCTAGGAAAATTTTGTGTATACGCCTACTAGGATTTTTTAAATCTCGCATGTTCCACATAAAGTGGTGGTTGAATG ATCATGAAACCGTTCAGTGCAATAATACCTATGGTACCTACAGGCGATCCTTTTTAAAACACATATGCGGATGATCCTAAAAAATTTAGAGCGTACAAGGGTATTTTCACCACCAACTTAC

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Inventor: Stephen A. JOBLING et al. Attorney Docket No.: 054163-5001

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ATATAATGGCATATACTATGATCCTCCCGAGGAGAAGTATGTGTTCAAAAATCCTCAGCCAAAGAGACCAAAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACTACGGA ATATAATGGCATATACTATGATCCTCCCGAGGAGGAGGAGTATGTGTTTCAAAAATCCTCAGCCAAAGAGACCAAAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGA ATATAATGGCATATACTATGATCCTCCCGAGGAGGAGGAGTATGTGTTCTAAAAATCCTCAGCCAAAGAGACCAAAAAATCACTTCGGATTTATGAGTCGCACGTTGGAATGAGTAGTACGGA

FIG. FIG. 3-3

FIG.

3-1

FIG.



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AGCCCCTGGCACAGTTTCAGAAGAATCCCAGGTGCTTACTGATGTTGAGAGTCTCATTAT csbe2con. seq AGCCCCTGGCACAGTTTCAGAAGAATCCCAGGTGCTTACTGATGTTGAGAGTCTCATTAT 20con. seq AGCCCCTGGCACAGTTTCAGAAGAATCCCAGGTGCTTACTGATGTTGAGAGTCTCATTAT 35con. seq	510 520 530 540	AATATATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTC csbe2con. seq AATATATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTC 20con. seq AATATATGACATAGATCCAAGCTTGACAGGCTTTCGTCAACACCTAGATTACCGGTATTC 35con. seq	690 700 710 720	GGCACCAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGC csbe2con. seq GGCACCAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGC 20con. seq GGCACCAGGAGCTACGTGGGCTGCATTGATTGGAGATTTCAATAACTGGAATCCTAATGC 35con. seq	006 068 088 048	CAACAAAGATTCTATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCC csbe2con.seq CAACAAAGATTCTATTCCTGCTTGGATCAAGTTCTCAGTTCAAGCACCAGGTGAACTCCC 1805 CAACAAAGATTCTATTCCTGCTTGGATCAAGTTCGCAGTTCAAGCACCAGGTGAACTCCC 35con.seq
TTCAGAAGAAT TTCAGAAGAAT TTCAGAAGAAT	500	TCCAAGCTTGA TCCAAGCTTGA TCCAAGCTTGA	089	STGGGCTGCAT STGGGCTGCAT STGGGCTGCAT	098	CCTGCTTGGA CCTGCTTGGA CCTGCTTGGA
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TGATCGAAGGACCTCCTCTTGCCTTTCCTTCAACTTCAAGAAGGCGGCGTTTTCTAGGAG csbe2con. seq GGATCGGAGGACCTCCTCTTGCCTTTCCTTCAACTTCAAGAAGGAGGCGCGTTTTCTAGGAG 20con. seq TGATCGAAGGACCTCCTCTTGCCTTTCCTTCAACTTCAAGAAGGCGGCGTTTTCTAGGAG 35con. seq

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FIG. 3-

GCCAGTAATTAACACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCT csbe2con. seq GCCAGTAATTAACACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCT 20con. seq GCCAGTAATTAACACATATGCCAACTTTAGAGATGATGTGCTTCCTCGCATCAAAAAGCT 35con. seq

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TENTE TRACE

2244 GCAAGAGTTTGATCAGGCAATGCAACTCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCA 2165 GCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCAA 2161 GCAAGAGTTTGATCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTTGAGCA

ATGATTTTAAAGTCOCTAATAAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAG csbe2con. seq ATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCTCATGGATATTGTTCATAG 20con. seq ATGATTTAAAGTCTCTAATAGATAAAGCTCACGAGTTAGGTCTTCTTGTTCTMATGGATATTGTTCATAG 35con. seq

TCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTTCAAATACAAGGGGGTGGTGGTTGGATGAGTACAA csbe2con. seq TCAACTATGGGAGCTGGGAGGTTCTAAGGTTTCTTTCTAAATGCAAGGTGGTGGTTGGATGAGTACAA 20con. seq TCAAC**G**ATGGGAGCTGGGAGGTTCTAAGGTTTCTTTCAAATGCAAGGTGGTGGTTGGATGAGTACAA 35con. seq

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TTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGA csbe2con. seq TTCAGAAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGA 20con. seq TTCAGAAGAGAGAGATGAAGATTGGAAAATGGGTGACATTGTACATATGCTGACCAACAGGCGGTGGTTGGA 35con. seq CATCTACTCCTCTTATAGATCGTGGAATAGCATTGCACAAAATGATCAGGCTTATTACCATGGGOTTAGG csbe2con. seq CATCTACTCCTCTGATAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGG 1805 CATCTACOCCTCTTATAGATCGTGGAGTAGCATTGCACAAAATGATCAGGCTTATTACCATGGGATTAGG 35con. seq

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FIG. 4-2 FIG. 4-3 FIG. 4-4 FIG. 4-1

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840 960 GTGTCTGGGAGATCTTTTGCCGAATAATGCAGATGGTTCACCACCAGCATGGTTCTCGAGTAAAGATAGGCATGGATACTCCATCTGGAACAAAGATTCTATTCCTGCTTGGA AGTTCAAGAGTCAAGTTCGTGGTCCACTTGAGGGTATATTACCGTATATGATACTAGGAGGGCTCCTCCTCTTCATACACAGTTTTTAGGAGTCGGTTTCTCTGGTTTTTAGTGAAGCCT CACAGACCCTCTAGAAAAACGGCTTATTACGTCTACCAAGTGGTGGTTAAGGGGTACCAAGAGCTCATTTCTATGCGTACCTATGAGGTAGACCGTTGTTTCTAAGATAAGGACGAACCT <u>TCAAĢTTCTÇAGTTÇAAGCACCAGGTGAAÇTCCCATATAATGGCATATAÇTATGATCCTÇCCGAGGAGGAGAAGTATGTGTTCAAAAAATÇCTCAGCCAAAGAGAGACAAATCACTTCGGA</u> 3 ᆸ \leq α × × ablaÇ ഗ Д abla \Box Ľ. α \Rightarrow × 口 [고] α ഥ Д Ç Д \Box Д \succ \succ Н Д \vdash Д Ċ വ Z G \succ Д ᆸ ഥ G Д K 0 \triangleright S ſŦ.

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ĆCTGATCGTĊGATAAGCCTAATGGĆTCAAĊCGACĠAATTŤCGGTĊCTTTĊATGTŤCTATĆAGAAĊCTAAĠTCTAĊTAGGĀAACAÁACCTĊCGAAÁCCGTĊCGAAŤCAGTÁCTACĠTCTCĊ ഥ လ Ç ſæ, Ç \Box \Box ഗ \Box > × × c പ 口 ر G \triangleright 24 ഗ

<u>ACTTÇAGCTȚTGAAGGGTGGTACGATAACÇGGCCȚCGATÇCTTCATGGTGTACAÇACCAȚGTAGAACAGÇAGTGGTCTAȚGCTTȚAGTGGAGGAȚGAAGTGGAAATTGGAACCTG</u> 四 ᆸ Ø \succ \gt > × ᄄ ഗ œ വ α Z Д 3 c 四 [고

TCGCCGGTTAAGATATATCTTAACAACAGGTTCTGAAGCAGGAATGCCATTATTGATCTTCCTATGTT ~2588 AGCGGCCAATTCTATATAGAATTGTTCCAAGACTTCGTCCTTACGGTAATAACTAGAAGGATACAA

FIG. 4-3



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	, L		180	.90	-100	,110	r120
	125+94. seq		CACAAACTTTT	PECACCEAGE	AGCCGATTTGC	SAACTCCTGA	PGATTTGAAG
	116. seq	TAGUTITIGGGIAT CA GICACARCIIII AGGA TAGUTITIGGGIATICACGICACAACTITITATGCAGCTAGCAGCCGATITIGGAACTCCTGATGATTTAAAG 11110	CACAAACTTT7	TGCAGCTAGC	AGCCGATTTG(SAACTCCTGAT	GATTTAAAG
		,130 ,140	150	1170	170	11.00	-1200 -190
	125+94. seq	TCTTTAATAGATAAAGCT	CATGAGTTAGG	SCTGCTTGTTC	TCATGGATATT	TGTTCATAGC	CATGCGTCAA
	116. seq	TCTCTAATAGATAAAGCT	CACGAGTTAGG		ICATGGATAT. ICATGGATAT!	IGTTCATAGC	ATGCATCAA
		-1210 -1220 -200 -210	*1230 ;220	-1240 -230	-1250 -240	-1260 -250	-1270 -260
	125+94. seq	ATAATACGTTGGATGGGC	IGAACATGTTT	BATGGTACGGA	TAGTCACTACT	PTCCACTCCGG	SATCACGGGG
	116. seq	CTAATACGTTGGATGGGC	IGAAATATGITI	GATGGTACGG	ATGGTCACTAC	CITICACIC C	SGACCACGG
		-1280 -1290 -270 -280	-1300 -290	*1310 -300	-1320 -310	-1330 -320	-1340
	125+94. seq	TCATCATTGGTTGTGGGA		CAACTATGGA	AĞÇTĞĞĞAĞĞT	roctaagatti	CTTCTTTCA
	116. seq	TCATCATTGG TGTGGGA(CAACTATGG	AGCTGGGGAGGT AGCTGGGGAGGT	l CTAAG TTI FTCTAAGGTTI	CTTCTTTCA
		-1350 -1360 -340 -350	-1370 -360	•1380 •370	-1390	-1400	-1410
	125+94. seq	AATGCAAGATGGTGGTTGC	PAGAGTACAG	TTTGATGGTT	LTAGATTTGAT	IGGGGTGACTT	CCATGATGT
FIG. 5-1		AATGCAAGGTGGTGGTTGC	SATGAGTACA	TTTGATGGT	r AGATTTGAT rcagatttgat	regegreactr	CAATGATGT
CY JI		*1420 *1430 -/10 -/20	-1440 -420	-145 0	-1460 ·	1470	-1480
FIG. 3-7	125+94. seq	ACACTCCCCATGGGTTGC	GGTAGCTTTTP	r440 CTGCCAACTA	r450 JAATGAGTACT	r4bU PTGGATATGC	-4/0 NAACTGATGT
FIG. 5-3	5	ACAC C CATGG TTGCP	NGGTAG TTTTP NGGTAGATTTTP	CCGCCAACTA(CAATGA TACT	PTTGGATATGC	AACTGATGT
FIG 5	•	-1490 -1500	-1510 -500	-1520 -510	1530	1540	1550
	125+94. seq	AGATICCTICTICATITITATITIC	ATGCTTGTGA	TGATATGATT	ACGGTCTTT	rosu recemendent	-540 GTTACCATT
	116. seq	AGATGCTGTGGTTTATTTC	ATIGCT TIGAP	TGATATGATT TGATATGATT	A GGTCT TT	CCC GAGGCT	IGT ACCATT
		*1560 *1570 *550	-1580 -570	41590	1600	1610	1620
	125+94. seq	GGTGAAGATGTTAGCGGAA	AGCCAACATTT	TGCATTCCAG	IGGAAGATGGT	rbUU 'GGTGTTGGAT	TTGATTACC
	116. sed	GGTGAAGATGTTAGTGGAAA	TGCCAACA TT	TGCATTCC G	i GAAGATGGT		TTGATTA C
	1	L1630 L1640	41650	1660	1670	1680	1690
	125+94. seq	rozu <u>Greregaregecarrec</u>	rb4U CGATAAATGGA	rbbU TTGAGATTCT	-660 PAGAAGAGAG	-670 SATGAGGACTG	.680 GAAAATGGG



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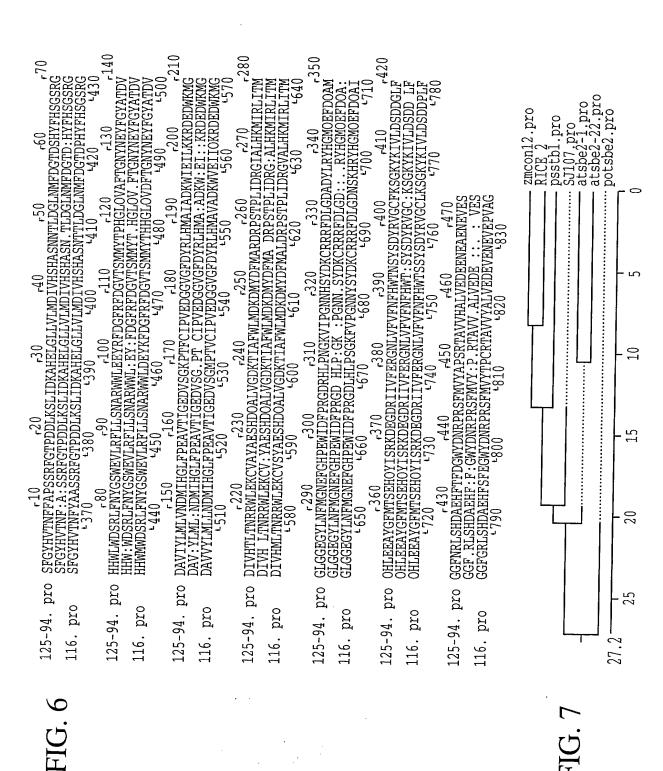
720 GGTGGTTG GGTGGTTG 5CGTGGTTG -11800 7700	THETHEGREACAAACTATTECATTTTGCCTGATGACAA 1850	r900 r900 GGGCTTAGGCGGAGARGATTTTATGGGAAATGAATTTGGACATCCTGAGTGGATTGATT	GGGATCGACATCTGCCCAATGGTAAAGTAAT G GATC ACATCT CCCA TGGTAAA T T GTGATCTACATCTTCCCAGTGGTAAATTTGT -2060	r1050 ATTTGATCTAGGTGATGCAGACTATCTAAGATATCATGGAATGCAAGAGTTTG TTTGATCTAGG AT CA A ATCT AGATATCATGGAATGCAAGAGTTTG GTTTGATCTAGGCAATGCAAAGCATCTGAGATATCATGGAATGCAAGAGTTTG	r1120 CTTGAAGAAGCCTATGGTTTCATGACTTCTG CTTGAAGAAGCCTATGGTTTCATGACTTCTG CTTGAAGAAGCCTATGGTTTCATGACTTCTG -2200	TCATTGTCTTTGAGAGGGAAACCTTGTTTTTTGTATTCAA ICATTGTCTT GAGAGGGAAACCT GTTTTTTGTATTCAA ICATTGTCTTCGAGAGGGGAAACCTCGTTTTTTGTATTCAA *2270 *2280 *1270 *1280 *1280	CCGAGTTGGCTGCTTCAAGTCAGGAAAGTACAAGATTGTT CCGAGTTGGCTGCTT AAG CAGGAAAGTACAAGAT GT CCGAGTTGGCTGCTTAAAGCCAGGAAAGTACAAGATAGTC L2340 - L2350 - L2360 - L2340
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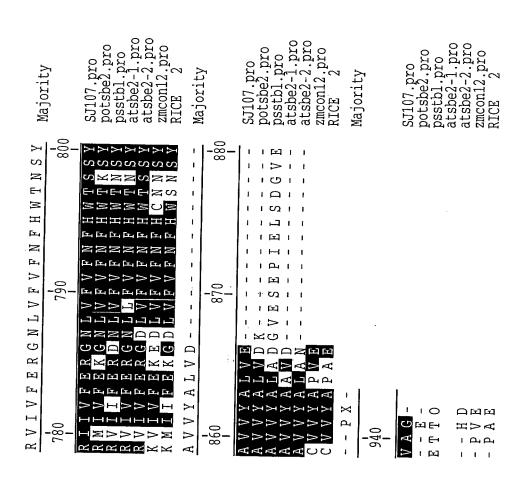


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FIG. 8-8



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TAAATTTGTTCCTGGGAACAATTACAGTTATGATAAATGCCGGCGTAGGTTTGATCTAGGCAATTCAAAGCGTCTGAGATATCATGGAATGCAAGAGTTT ATTTAAACAAGGACCCTTGTTAATGTCAATACTATTTACGGCCGCATCCAAACTAGATCCGTTAAGTTTCGCAGACTCTATAGTACCTTACGTTCTCAAA GATCAAGCAATTCAGCATCTTGAAGAAGCCTATGGTTTCATGACTTCTGAGCACCAATACATATCACGAAGGATGAAAGGATCGGATCATTGTCTTCG 400 R F D L G N S K R L·R Y H G M O KFVPGNNYSYDKCRR

CTAGTTCGTTAAGTCGTAGAACTTCTTCGGATACCAAAGTACTGAAGACTCGTGGTTATGTATAGTGCCTTCCTACTTTCCCTAGCCTAGTAACAGAAGC <u> 3GATYCAGAȚGATCÇTTTGȚTTGGAGGCTȚTGGCAGGCTȚAGTCATGCAGAĢCACTȚCAGCȚTTGAAGGGTGGTACGATAAÇCGGCÇTCGAȚCCTTÇ</u>
 CCTAAGTCTACTAGGAAACAAACCTCCGAAACCGTCCGAATCAGTACTACGTCTCGTGAAGTCGAAACTTCCCACCATGCTATTGGCCGGAGCTAGGAAG

ATTICCATCCTGGTICTIGGTATTITGTTGTCATGATAAACATAATCAAAGACCAATAGGAAACGCAGGGTTACATGCTAGCTTCCATCATCATAGGGAG TAAAGGTAGGACCAAGAACCATAAAACAACAGTACTATTIGTATTAGTTTICTGGTTATCCTTTGCGTCCCAATGTACGATGGAGGTAGTAGTATCCTC SDDPLFGGFGRLSHDAEHFSFEGWYDNRPRSF C R T A V Y A L V E D E V E N E V E P V A

CTCAGACCTCCTAAACCATAAATCTTCAAGCTGCCTGCGTTCGGTAGTATGTTATGTGGTACTTTGCAATCTTAAATTATCATGATCGCTGTGGATGCTA GAGTCTGGAGGATTTGGTATTTAGAAGTTCGACGGACGCAAGCCATCATACAATACACCATGAAACGTTAGAATTTAATAGTACTAGCGACACCTACGAT

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GCCGATTTGGAACTCCTGATGATTTGAAGTCTTTAATAGATAAAGCTCATGAGTTAGGGCTGCTTGTTCTCATGGATATTGTTCATAGCCATGCGTCAAA CGGCTAAACCTTGAGGACTAATAAACTTCAGAAATTATCTATTTCGAGTACTCAATCCCGACGAACAAGAGTACCTATAACAAGTATCGGTACGCAGTTT

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<u>AACTATGGAAGCTGGGAGGTGCTAAGATTTCTTTTCAAATGCAAGATGGTGGTTGGAAGAGTACAGGTTTGATGGTTTTAAGATTTGATGGGGGTGACTT</u>

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GGACAAGGAÇATGTACGACTTCATGGCTCGTGACAGACCATCTAÇTCCTÇTTATAGATCGTGGAATAGCATTGCACAAAAGAATGATÇAGGCTTATTACCATG CCTGTTCCTGTACATGCTGAAGTACCGAGCACTGTCTGGTAGATGAGGAGAATATCTAGCACCTTATCGTAACGTGTTTTACTAGTCCGAATAATGGTAC M Y D F M A R D R P S T P L I D R G I A L H K M I R L I T M

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AAGTAATTCCAGGGAACAACCACAGTTATGATAAATGCCGTCGTAGATTTGATCTAGGTGATGCAGACTATCTAAGATATCATGGAATGCAAGAGTTTGA TTCATTAAGGTCCCTTGTTGGTGTCAATACTATTTACGGCAGCATCTAAACTAGATCCACTACGTCTGATAGATTCTATAGTACCTTACGTTCTCAAACT AGGGGAAACCTTGTTTTGTATTCAACTTTCATTGGACTAACAGCTATTCAGATTACCGAGTTGGCTGCTTCAAGTCAGGAAAGTACAAGATTGTTTTGG TCCCCTTTGGAACAAAAACATAAGTTGAAAGTAACCTGATTGTCGATAAGTCTAATGGCTCAACCGACGAAGTTCAGTCCTTTCATGTTCTAACAAAACC ACTCGGATGATGGCTTGTTTGGAGGCTTCGACAGGCTTAGTCATGATGCCGGAGCACTTCACCTTTGACGGGTGGTATGATAACCGGCCTCGGTCTTCAT GGTAȚATGCACCATÇTAGGACAGCAGTGGTCCATGCTTTAGTAGAGATGAAGAAGAATGAAGCAGAGAATGAAGTAGAAGTAGAAGTGAAGTGAAACCAGCCTCC CCATATACGTGGTAGATCCTGTCGTCACCAGGTACGAAATCATCTTCTACTTCTTTACTTCGTCTTTACTTCATCTTTCACTTTCACTTTCACTTTTCACTTTTCACT GGCTGAGATAGATATTTAGTAAGAGGATCCCCTAAAGCAGGAATGGTTAACCTGTGCATCTGCATTGAACGACGTATATTGAGACTTGAATTGATTTGCT CCGACTCTATCTATAAATCATTCTCCTAGGGGATTTCGTCCTTACCAATTGGACACGTAGACGTAACTTGCTGCATATAACTCTGAACTTAACTAAACGA 1600 VIPGNNHSYDKCRRFDLGDADYLRYHGMOEFD **TGAGCCTACTACCGAACAAACCTCCGAAGTTGTCCGAATCAGTACTACGGCTCGTGAAGTGGAAACTGCCCACCATACTATTGGCCGGAGCCAGGAAGTA** N L V F V F N F H W T N S Y S D Y R V G C F K S G K Y K I V NEAENEVESEVK WYDNR ტ GFNRLSHDAEHFTFD E. Hinc II R T A V V BamH I

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CTGCGTGCACTCTGTAAATTATATGTACTTTGGCAAGTCACGTTATTATGGATACCATGGATGTCCGCTAGGAAAAATTTTGTGTATAAGCGCCTA

CGAGTCCTGTGTCTTATAATTAAGGTTCCGAGTTCCGTCTCTATGTGCGGTATTACGTACTAGTATACTTTCGAGGGGTTGAACATTTAGTAAATCGTTC

<u>ĠCTCĄGGACĄCAGAĄTATTĄATTCÇAAGGÇTCAAĢGCAGĄGATAÇACGCÇATGAŢGCATĢATCAŢATGAĄAGCTÇCCCAĄCTTGŢAAATÇATTTĄGCAAĢ</u>

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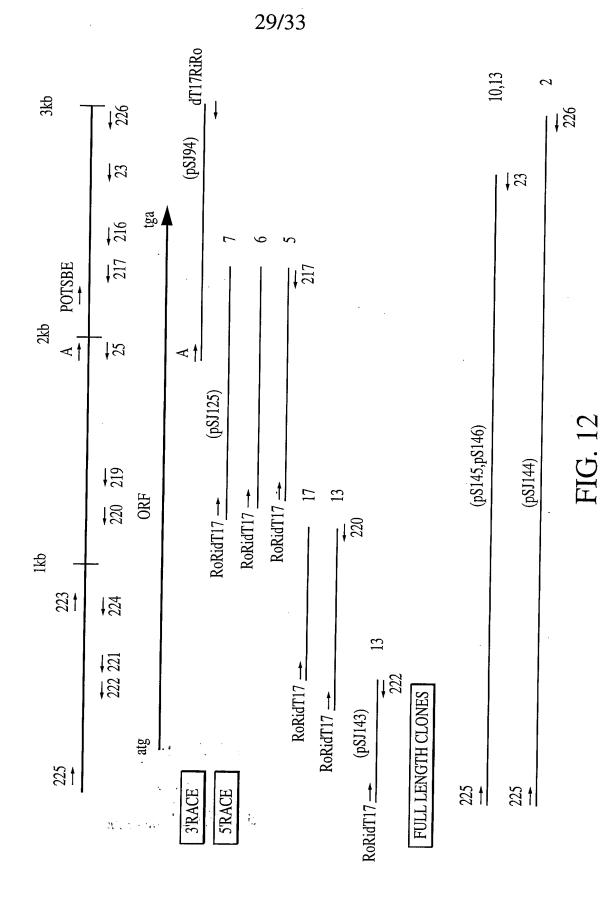
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FIG. 13-1

FIG. 13-2

FIG. 13-3 FIG. 13-4

FIG. 13

FIG. 13-1



CTTGGCAGGTTTCCGTCAGCATCTTGACTACCGATATTCACAGAAAAGGCTGCGTGAGGAAATTGACAAGTATGAAGGTGTTTGGATGCATTCTCGTGGATTTGAAAAGTTTGG 840 GAACCGTCCAAAGGCAGTCGTAGAACTGATGAGGGTCATGTTTTCCGACGCACTCCTTTAACTGTTCATACTTCCACCAAACCTACGTAAGAGAGCACCTAAACTTTTCAAACC AAAGAATGCĠTCACTTTTGTCCTTATTGAATATCCCCTTTACCCGTGĠACCTCGATGCACGTĠAATAACCTCTAAAGTTGTTAACCTTAGĠATTACGTCTACAGTACTGAGCCTTACT Ċ TTTCTTACGCAGTGAAACAGGAATAACTTATAGGGAATGGGCACCTGGAGCTACGTGGGCTGCACTTATTGGAGATTTCAACAATTGGAATCCTAATGCAGATGTCATGACTCGGAATGA 됴 æ \mathbf{z} \triangleright വ K z ᄄ Ø Д \Box z 口 3 Ö z ഗ Z ГZД Ē-× Ġ Н 口 Ы Ø ы Ø œ ≥ ⊱ 召 ď × c \succ Д 0 ď വ 3 \succ ഥ 24 α \Box ⊱ **--**--Н T. G (E) # ŵ 24

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ACTATACTAAGTGCCAGAAAAGGGACTCCGACAATGGTAACCACTTCTACAATCGCCTTTCGGTTGTAAAACGTAAGGTCACCTTCTACCACCACAACCTAAACTAATGGCAGAGGTGTA ഥ G Н 드 ø 떠 വ ഥ ᆸ Ç \Box

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÷2160 <u>ATTGCACAAAATGAŢCAGGÇTTATŢACCAŢGGGCŢŢAGGÇGGAGAAGGAŢATŢTŢTATGGGAAAŢGAATŢTGGAÇATCCŢGAGTGGATTŢTCCAAGAGGGGATCGACATCT</u>

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GCCCAATGGTAAAGTAATTÇCAGGGAACAACCACAGTTATGATAATGCÇGTCGTAGATÇTAGGTGATGÇAGACTATCTAAGATATCATGGAATGCAAGAGTTTGATCAGGCAAŢ CGGGTTACCATTTCATTAAGGTCCCTTGTTGGTGTCTATTTACGGCAGCATCTAAACTAGATCCACTACGTCTGATAGATTCTATAGTACCTTACGTTCTCAAACTAGTCCGTTA

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GCAAÇATCTŢGAAGAAGCCŢATGGŢTTCAŢGACTŢCTGAĢCACCĄGTATĄTATCĄCGGAĀGGATGAAGGĄGATCĢGATCĄTTGTÇTTTGAGAGGGGAAACCTTGŢTTTTGA Z z Ġ α ſΉ α Q Ç ഥ × α വ Н 0 二 드기 വ G

2520 TCATTGGACTAACAGCTATTCAGATTACCGAGTTGGCTTCAAGTCAGGAAAGTACAAGATTGTTTTTGGACTCGGATGATGGCTTGTTTGGAGGCTTCAACAGGCTTAGTCATGATGC

AGTAACCTGATTGTCGATAAGTCTAATGGCTCAACCGACGAAGTTCAGTCCTTTTCATGTTCTAACAAAACCTGAGCCTACTACCAACAACCTCGGAAGTTGTCCGAATCAGTACTACG ø \Box ᆸ 24 z ഥ G G 山 Ċ \Box လ Д П Н × × \simeq G വ × G വ z H 3

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